United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oregon State Office
2600 S.E. 98th Avenue, Suite 100
Portland, Oregon 97266
(503) 231-6179 FAX: (503) 231-6195

Reply To: 8330.3173 (98)
File Name: 98f317b.wpd

October 23, 1998

Jerry Elliot and Greg Mitchell
Oregon Military Department
1776 Militia Way
P.O. Box 14350
Salem, Oregon 97309-5047

Dear Mr. Elliot and Mr. Mitchell:

Thank you for arranging the opportunity to meet at Camp Rilea with Dr. Paul Hammond and others to look at management in the field on October 7, 1998. The field trip offered a good opportunity to take a look at the Camp Rilea's Management Plan in relation to the present condition and state of habitat management areas.

The management of the last 7 years focused on management of habitat to maintain the host plant of the Oregon silverspot butterfly and vegetation height of 7 inches. Based upon the techniques used, the management implemented since 1991 has been consistent with the following objectives: 1) control Scotch broom, 2) develop techniques for control of exotic grasses, 3) maintain or increase goldenrod in managed areas, 4) maintain the presence of violets in managed areas, 5) maintain or increase the density of violets along transects sampled, and 6) monitor use by Oregon silverspot butterflies during the flight season.

In general, observations of management at Camp Rilea indicate the following:

1) While Scotch broom has not been eliminated, it is controlled to a degree that grassland species are able to dominate the landscape in most of the managed areas. Aside from the control of Scotch broom which is needed in Area 4W, visual observation of habitat areas indicate the techniques in use have been successful in controlling Scotch Broom.

2) Techniques for control of exotic grasses have resulted in the use of mowing to maintain an average meadow height of 7 inches or less throughout most managed areas. In comparing managed areas with adjacent areas of unmanaged habitat, it is evident the management regime implemented at Camp Rilea has been successful in maintaining a low vegetation height which helps to maintain the violets. Bent grass has been particularly difficult to control unless one fall and two spring mowings are used. Monitoring of vegetation height provides information on when mowing is needed; however, there is concern that mowing regime

could also be having a gradual long-term adverse effect on native herbaceous species, particularly herbaceous plants which flower in the spring. To better understand the effect of techniques used to control bent grass, OMD should look at adding monitoring of species richness and diversity in the future.

3, 4 and 5) The annual reports would appear to indicate that the management has resulted in maintaining violets and increased one of the butterfly's preferred late season nectar sources, *Solidago canadensis*. The transect data indicate that there have been decreases in some management areas in some years. It is unknown whether or not the variation is due to management actions or natural variation in violet populations. Data collection methods utilized limit the conclusions which may be drawn. Statements as to the effect of management may only be applied to each individual transect. Even so, such statements are subjective at best because replication of data would be difficult to impossible and sampling error is not determined. Permanent transects were not established, yet transects were not selected randomly either. This means comparisons cannot be made between transects from year to year and/or between management areas. Extrapolations of findings to the entire habitat management area cannot be made either. Similarly, information in the plan regarding acres of available violet habitat and condition must be viewed with extreme caution.

The emphasis and focus on the control of exotics such as Scotch Broom and bent grass, and the alteration of past mowing practices were appropriate for the immediate needs of the species and habitats in prior years. Because of the prevalence of exotic species through much of the managed areas, it is very likely habitat quality would have either declined and suppressed violet numbers without management, or would have consisted of an intensely mowed lawn which may have maintained violets but limited nectaring opportunities for the species.

The proposed Management Plan begins to add objectives for maintaining quality violet habitat. While the Service believes this is a good direction to move in, the techniques used will not provide quality data necessary to make informed decisions regarding management needs or modifications. We suggest the incorporation of objectives and techniques which will answer whether management is increasing, maintaining or decreasing violets, nectar species, and problem species, such as exotic grasses and Scotch broom.

The low population numbers of butterflies at Clatsop Plains at this time makes it difficult to use the monitoring of ovipositioning as an indicator of habitat management success. An objective to obtain use by 20 butterflies may be difficult to meet if current populations are being limited due to factors unrelated to management at Camp Rilea. If the intent of this objective is to assure availability of sufficient habitat and quality to support 20 Oregon silverspot butterflies, objectives may need to be tiered to looking at violet and nectar plant frequency and distribution and at how well these habitat features are being maintained at Camp Rilea, at least until butterfly population numbers improve. However, the monitoring of Oregon silverspot butterfly oviposition and use in the fall is probably most useful in determining what areas have a high risk for take in the following year. Therefore, continuation of annual monitoring and collection of this information would be useful in planning or adjustment of activities planned for the following year and may be viewed as a reasonable and prudent measure for reducing incidental take.

In this next phase of management and ecosystem planning, a good monitoring plan is critical for providing a level of information necessary to base decisions in an adaptive management strategy. We, therefore, strongly urge Oregon Military Department to consider changes which will improve upon its ability to make management recommendations in the future. Questions related to what effect management is having on violet and nectar frequency and distribution and other native grassland indicators are likely to become increasingly important to management of the ecosystem at Camp Rilea. Therefore, we believe it is appropriate to work with objectives which: 1) are in line with maintaining violet and nectar frequencies and distribution; and 2) help to determine the effect of management on violet, key nectar species and other vegetative components important to the management and health of the grassland ecosystem. Improvements to the current monitoring scheme and development of a sampling design over the next five years are needed to improve upon Oregon Military Department's ability to address how management is affecting vegetation, the community structure, and key habitat components of the Oregon silverspot butterfly. We believe improvements to the current monitoring scheme can be made which minimize increases in cost, yet greatly improve the quality of information needed to make management decisions.

Fire may also be a tool to manage habitats. This management technique would need to be examined on an experimental basis using small test plots to determine if it will be an effective tool and determine which management areas will be most suitable for treatment. We recommend that Oregon Military Department consider incorporating testing fire as a management tool into their Management Plan.

We offer the following comments and suggested changes to your management plan. There is likely a range of implementable options which can improve the quality and value of data collected. Therefore, do not feel limited to the suggestions presented below. We would be willing to discuss objectives and alternatives which you feel would suit your needs better and accomplish the same goal of improving monitoring and setting a time frame for implementing changes.

1) Modify, add or include objectives which:

a. Continue to monitor and control known threats, such as as Scotch broom and exotic grasses.

b. Determine and maintain violet frequency and distribution in current habitat management areas. To accommodate natural fluctuations in violet availability, Oregon Military Department may want to examine past data and set an objective which covers and anticipated range of frequencies and distribution, e.g., within 20 percent of frequencies and distribution determined in 1999 . Since new methodologies are to be used, the objective should be reevaluated after 2-3 years of data is collected.

c. Maintain or increase the frequency and distribution of key nectar species in habitat management areas.

d. Maintain special botanical species in areas where they currently occur.

e. Maintain or enhance native prairie diversity and/or species richness.

2) Modify data collection methods to suit objectives.

Monitoring should be able to determine whether management is increasing, decreasing or maintaining violets and key nectar species in each habitat management area so that techniques used may be correlated to responses observed. Because the distribution of violets tends to be patchy, not all grassland or managed habitat contain violets. Table 17 of your plan suggests that 45.55 acres of the 68 acres of mowed habitat actually contain violets. Yet, it is unclear how the 45.55 acre figure was derived, and no information is presented which would indicate how much violet habitat was present in 1991. We recommend monitoring the frequency and distribution of violet and key nectar species in each management area as a means to determine how much butterfly habitat is present, how much violet habitat and nectar habitat is present or available in relation to the amount of grasslands being managed, and whether or not violets or nectar resources are being maintained or changing over time.

Understanding how much of the grassland violets occupy or be managed to occupy a grassland would be particularly valuable in conservation planning for the Clatsop Plains. If there are any data available from the information collected over the years which would lend insight into this aspect of management, it should be presented in the management plan.

Key nectar species which should be monitored include golden rod and aster. Seed collection efforts could complicate the interpretation of nectar data. Therefore, collection of data on nectar species should be timed to take place before seed collections are made in an individual habitat management area. It will also be important to track the date of seed collection efforts and know which areas collections were made, e.g., what techniques were used and what species were collected. Several options are outlined below for consideration.

2A. Change the sampling design to incorporate objective monitoring data.

The use of nested frequencies was discussed in the field as a means for determining frequency of specific plant species, such as violets, goldenrod, or lilies. After set up, this methodology is perhaps the least labor intensive of methods which would provide quality data. It is significantly less labor intensive than determinations of density, and may be conducted with the use of random transects. This methodology could provide answers to whether or not violets in each management area were expanding and increasing in frequency. Data on the presence or absence of plants, and whether the plant is blooming or vegetative should be collected.

You might consider running the old methodology in a certain number of management areas to obtain a calibration of how the two methods compare. Running both methodologies may provide a means for interpreting data collected from 1991 to 1997.

2B. Change the sampling design over a period of 2-5 years to incorporate objective monitoring data.

This would allow a slower transition to incorporating objective monitoring data. By running the newer methodology in 2-3 different habitat management areas each year, and continuing the use of the old methodology throughout all habitat areas, cost increases can be minimized and spread

out over time. Yet, objective monitoring data will be collected from all sites within 3-5 years. Sufficient data should be collected at the end of one complete monitoring cycle to evaluate whether a total transition to new methodology or continuation of this scheme can continue.

2C. Modify existing sampling techniques and add objective monitoring at periodic intervals.

Existing sampling techniques can be improved by 1) calculating the percentage of each habitat area covered by the transects, 2) establishment of permanent transects, 3) determining sampling error and variance, 4) increasing to at least 3 transects in each habitat management area, and 5) increasing the number of transects to cover at least 10 percent of managed grassland habitat in each habitat management area.

An objective monitoring component needs to be added and conducted on a select number of sites every couple of years.

Objectives will need modification based upon monitoring to be conducted. One suggested alteration for the first objective on page 5 of the Monitoring Plan was as follows:
"1) Achieve and maintain a fair or better condition for 90 percent of the transects..."

3. Monitor other ecosystem values or threats. Utilize monitoring techniques which can be easily adapted to look at other ecosystem features and sensitive species as the need arises.

See comments under 2A above. Information which may be valuable to collect within the next five years are noted below.

3A. Monitor sensitive plant species, such as the Fritillaria

Sensitive plants should also be monitored to determine if management is effective in maintaining or increasing this resource over time.

In areas where the Fritilaria is dense, a demographic study could be done. Permanent transects of 1/2 to one meter wide are recommended. A 50 x 1 meter quadrat would take approximately 2 hours to count.

In area 4W, a different mowing regime is proposed to avoid the blooming period of the Fritilllaria. Area 4W is an area where nectar species are present but few violets exist. A comparison should be done between Area 4W and another habitat management area with a west facing slope which has a different mowing regime, such as Area 7.

3B. Update information on the distribution of non-native and native plants in habitat management areas of Camp Rilea (Table 2 of the Management Plan)

The Service believes revising Table 2 of the Management Plan would provide valuable information on the effects of management on the ecosystem. We also recommend updating this distribution approximately every 5 years. It would also be helpful to add information into the

Monitoring Plan on each of the species contained in the table as to the flowering period and time of seed set.

3C. Periodically monitor *Hypochaeris radicata* and *Plantago lanceolata*

In Washington, these two species have been observed to have a vegetative structure which crowds out violets. There is concern that the present management regime may, over time, increase these species to the detriment of violets. Periodic monitoring every couple of years should be done to investigate whether or not these species are actually limiting violet distribution over time. This may not need to be monitored on an annual basis. A nested frequency analysis conducted every 2-3 years at the same time violet information is collected would gather this information with minimal increase in labor.

4. If current methodology is to be retained, clarify and expand discussion of techniques used to assess violets and nectar plants.

The plan needs a better description of how transects are done to clarify how data should be interpreted. For example, methodology used should be sufficiently explained such that it should be clear that one running foot of violet transect equates to a sample size of 5 square feet of ground. It is also unclear what constitutes a "clump" of goldenrod. How much space separates clumps? What is the range of number of infloresences which may constitute one clump? The description of techniques should also indicate what measures are taken to make sure clumps are not double counted? Are counts done along a tape?

5. After objective monitoring data has been collected for 2 or 3 years, evaluate data and reevaluate objectives in consultation with the Service.

While we would anticipate the opportunity to review data collected annually through the Monitoring Report, we feel it would be particularly worthwhile to reevaluate objectives in 2-3 years.

6) Management recommendations for Area 4W

Area 4W should be considered a candidate for a test burn. In addition, alternative means of controlling Scotch broom should be considered, e.g., pulling, or mowing in late summer. Also, mowing in late summer has been proposed to avoid impact to sensitive lilies. The effects of the summer mowing regime on the native prairie vegetation should be evaluated. This may be accomplished through monitoring in comparison with Area 7 which also occurs along a west facing slope but is managed under a different mowing regime.

7) Broaden the scope of "Genetic Augmentation"

Please consider expansion of this section to include not just genetic augmentation, but also augmentation as a means to overcome demographic stochasticity or small population sizes. If warranted, reintroduction to promote conservation and recovery, as long as it also contains the

same provisions of Service involvement and development of an interagency agreement could be discussed.

Recommended wording changes to 3rd paragraph are as follows: 1) Delete the word "genetic" in the second sentence of paragraph 3; and 2) End 3rd paragraph after "...in conjunction with habitat management programs such as at Camp Rilea." Start a new 4th paragraph which should read: "Augmentation at Camp Rilea is being considered by the USFWS. If approved, an interagency....."

We request that OMD consider the ideas and suggestions outlined above. We would like to hear from you within 10 days as to whether or not you feel these changes are feasible and how changes may be implemented or incorporated into your plan. If you need longer, please contact us to discuss, as we may need to request an extension to complete of the formal consultation, particularly if you perfer to make changes to the draft plan and resubmit a revised plan prior to finalization of a Biological Opinion. Please contact Diana Hwang or Rollie White at 503-231-6179.

Sincerely,

for Russell D. Peterson
State Supervisor

cc: Paul Hammond, 2435 E Applegate, Philomath, Oregon 97350